



EPD Seminar

Exclusive hadronic cross-sections at BaBar and implications for the anomalous magnetic moment of the muon

Speaker: Dr Liangliang Wang (IHEP)

Time: 11:00 am, October 10, 2014

Place: Room B324

Organized by the Experimental Physics Division

Abstract:

After more than 50 years since the first measurements, the study of e^+e^- annihilation processes at low energies can still provide rich information in an energy region where perturbative QCD cannot be used. The BABAR Collaboration has an intensive program on hadronic cross-sections in low-energy e^+e^- collisions, which are accessible via initial-state radiation with data taken near the $\Upsilon(4S)$. Our measurements allow significant precision improvements of the predicted value of the muon anomalous magnetic moment. These improvements can shed light on the current ~ 3.5 sigma difference between the predicted and the experimental values. We review the status of our program, report on the precise cross-section measurements in the energy region between the production threshold and about 4.5 GeV for a variety of processes with 2-6 hadrons in the final state, and discuss the implications of these measurements for the muon $g-2$.

*****Food and drinks will be served after the seminar.*****